Summary of TDEC's January Surface Water Quality Data

On January 2, 2009, TDEC began bi-weekly sampling for heavy metals at several stations in the area of the Kingston ash spill. A map of the TDEC sampling stations is available at the link labeled TDEC Water Monitoring and Sampling Map

Metals levels were highest immediately following the spill and whenever the ash has been resuspended by rainfall or disturbances such as boat traffic. Generally, higher metals have been observed to be associated with solids in water samples.

There were no January water quality criteria violations at any location for chromium, antimony, beryllium, copper, nickel, selenium, or zinc. For some metals such as vanadium, barium, cobalt, or strontium, EPA has yet to suggest water quality criteria and Tennessee and most other states have not yet adopted any criteria.

Specific metals that were measured above Tennessee's chronic water quality criteria for protection of fish and aquatic life at least once in January include aluminum, cadmium, iron, and lead. Most of the violations were in the Emory River near the ash spill. Arsenic was found in 3 samples in the Emory near the spill site at levels above our criteria for domestic water supply, but other sites were lower. Mercury was detectable in 2 samples, and those were above our criteria for protection of fish tissue for human consumption. Those 2 samples were above and below the spill site, but samples closer to the spill site were lower. Criteria for waters that serve as a source of drinking water and from which fish are consumed have also been violated by some of our thallium samples from both the Tennessee and Emory. We have not had any violation of our thallium standard for drinking water only. We found no other water quality criteria violations in our January Clinch River or Tennessee River samples.

In partnership with TWRA, fish tissue samples have been collected, but are not yet analyzed. From this continuing monitoring, we will look for tissue concentrations of metals associated with the ash, such as selenium, arsenic, mercury, cadmium, and lead. If advisories are appropriate, the department will issue them. Sediment samples are also in the process of being collected, but results are not yet available.